

ATTN: MAIL STOP PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:

Silver, Gary M.
Wisnewski, Nancy
Brandt, Kevin S.

Serial No.: not yet assigned

Filed: October 2, 2003

Atty. File No.: FC-1-C1-PUS-1

For: "NOVEL CARBOXYLESTERASE
NUCLEIC ACID MOLECULES,
PROTEINS AND USES THEREOF"

) Group Art Unit:

) Examiner:

) PTO Customer No.: 26949

) INFORMATION DISCLOSURE
) STATEMENT

<p style="text-align: center;">CERTIFICATE OF EXPRESS MAILING</p> <p>I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS EXPRESS MAIL "POST OFFICE TO ADDRESSEE" UNDER LABEL NO. EV 322825365 US, ADDRESSED TO MAIL STOP PATENT APPLICATION, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, THIS <u>2</u> DAY OF OCTOBER 2003.</p> <p style="text-align: center;">HESKA CORPORATION</p> <p>By: <u>Susan A. Gordon</u> Susan A. Gordon</p>
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MAIL STOP PATENT APPLICATION

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to Applicants' duty of disclosure under 37 CFR § 1.56 and 37 CFR §§ 1.97-1.98, Applicants hereby provide the enclosed Form PTO-1449. The present application, Serial No. [not yet assigned], relies upon the previously filed application, Serial No. 09/403,942, filed October 29, 1999; which is a 371 filing of PCT/US97/20598, filed November 10, 1997; which is a continuation-in-part of Serial No. 08/747,221, filed November 12, 1996, for an earlier filing date. Therefore, in accordance with 37 CFR § 1.98(d), copies of all documents listed on attached Form PTO-1449 that were previously submitted to the U.S. Patent and Trademark Office in Application Serial No. 09/403,942 are not herein provided.

Respectfully submitted,

Dated: October 2, 2003

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APPLICANT FACSIMILE OF FORM PTO-1449 REV 7-80	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY DOCKET NO FC-1-C1-PUS-1	SERIAL NO. not yet assigned
LIST OF PUBLICATIONS CITED BY APPLICANT (Use several sheets if necessary)		APPLICANT Gary M. Silver, Nancy Wisnewski, Kevin S. Brandt	
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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

A1	Argentine, J.A. et al. "Characterization of a salivary gland-specific esterase in the vector mosquito, <i>Aedes aegypti</i> ," <i>Insect Biochem Mol Biol.</i> 1995 May;25(5):621-30;	
A2	Bonning et al., "Further Development of a recombinant baculovirus insecticide expressing the enzyme juvenile hormone esterase from <i>heliiothis virescens</i> ," 1992, pp. 453-458, <i>Insect Biochem. Molec. Biol.</i> , 22:5;	
A3	Bonning et al., "Insect control by use of recombinant baculovirus expressing juvenile hormone esterase," 1994, pp. 368-383, <u>Natural and engineered pest management agents</u> , by Paul A. Hedin, et al., <i>American Chemical Society</i> , Washington, DC.;	
A4	Booth, G.M. et al., "A comparative study of the effects of selective inhibitors on esterase isozymes from the mosquito <i>Anopheles punctipennis</i> ," <i>Comp Biochem Physiol B.</i> 44(4):1185-95 (1973);	
A5	Borovsky, D., "Oostatic hormone inhibits biosynthesis of midgut proteolytic enzymes and egg developments in mosquitoes," 1988, pp. 187-210, <i>Archives of insect biochemistry and physiology</i> , 7;	
A6	Cao et al., "A comparative study of esterase isoenzymes from three species of fleas," 1991, pp. 209-212, <i>Chinese Journal of Parasitology and Parasitic diseases</i> , 9(3);	
A7	Chen et al., "Purification and characterization of carboxylesterases of a rice brown planthopper, <i>nilaparvata lugens stal</i> ," 1994 pp. 347-355, <i>Insect Biochem. Molec. Biol.</i> 24:4;	
A8	Cooke, P.H. et al., "Amino acid polymorphisms for esterase-6 in <i>Drosophila melanogaster</i> ," <i>Proc Natl Acad Sci U S A.</i> 1989 Feb;86(4):1426-30;	
A9	Eldridge et al., "Insecticidal properties of genetically engineered baculoviruses expressing an insect juvenile hormone esterase gene," 1992, pp. 1583-1591, <i>Applied and Environmental Microbiology</i> , 58:5;	
A10	Hanzlik et al., "Isolation and sequencing of cDNA clones coding for juvenile hormone esterase from <i>Heliothis virescens</i> . Evidence for a catalytic mechanism for the serine carboxylesterases different from that of the serine proteases," <i>J Biol Chem.</i> 1989 Jul 25;264(21):12419-25;	
A11	Harshman, L.G. et al., "Cloning, characterization, and genetics of the juvenile hormone esterase gene from <i>Heliothis virescens</i> ," <i>Insect Biochem Mol Biol.</i> 1994 Jul;24(7):671-6.	
A12	Hinkle, N.C. et al., "Mechanisms of insecticide resistance in a strain of cat fleas," <i>J Entomol Sci</i> , 30:43-48 (1995);	
Examiner		Date Considered
*EXAMINER :		Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	B1	Jones, G. et al., "Structure, expression and gene sequence of a juvenile hormone esterase-related protein from metamorphosing larvae of <i>Trichoplusia ni</i> ," <i>Biochem J.</i> 1994 Sep 15;302 (Pt 3):827-35;
	B2	Ketterman A.J. et al., "Purification and characterization of a carboxylesterase involved in insecticide resistance from the mosquito <i>Culex quinquefasciatus</i> ," <i>Biochem J.</i> 287 (Pt 2):355-60 (1992);
	B3	McCutchen, B.F. et al., "Characterization of a spectrophotometric assay for juvenile hormone esterase," <i>Insect Biochem Mol Biol.</i> 1995 Jan;25(1):119-26;
	B4	Mouches, C. et al., "Characterization of amplification core and esterase B1 gene responsible for insecticide resistance in <i>Culex</i> ," <i>Proc Natl Acad Sci U S A.</i> 1990 Apr;87(7):2574-8;
	B5	Mumby, S.M. et al., "Synthesis and bioassay of carbamate inhibitors of the juvenile hormone hydrolyzing esterases from the housefly, <i>Musca domestica</i> ," <i>J Agric Food Chem</i> , 27:763-765 (1979);
	B6	Sparks, T.C. et al., "Comparative inhibition of the juvenile hormone esterases from <i>Trichoplusia ni</i> , <i>Tenebrio molitor</i> , and <i>Musca domestica</i> ," <i>Pesticide Biochemistry and Physiology</i> , 14:290-302 (1980);
	B7	Turchetto, M. et al., "In vitro study of esterase inhibition in the midge <i>Chironomus thummi</i> Kieff," <i>Boll Zool</i> 48:335-339 (1981);
	B8	Valaitis, A.P., "Use of concanavalin A in the purification of juvenile hormone esterase from the hemolymph and the fat body of <i>lymantria dispar</i> ," 1992, pp. 639-648, <i>Insect Biochem. Molec. Biol.</i> 22:7;
	B9	Vaughan, A. et al., "Mosquito carboxylesterase Est alpha 2(1) (A2). Cloning and sequence of the full-length cDNA for a major insecticide resistance gene worldwide in the mosquito <i>Culex quinquefasciatus</i> ," <i>J Biol Chem.</i> 1995 Jul 14;270(28):17044-9;
	B10	Venkataraman, V. et al., "Regulation of juvenile hormone esterase gene transcription by juvenile hormone," <i>Dev Genet.</i> 1994;15(5):391-400;
	B11	Venkatesh et al., "Characterization of affinity-purified juvenile hormone esterase from the plasma of the tobacco hornworm, <i>Manduca sexta</i> ," <i>J Biol Chem.</i> 1990 Dec 15;265(35):21727-32;
	B12	Ward, V.K. et al., "Analysis of the catalytic mechanism of juvenile hormone esterase by site-directed mutagenesis," <i>Int J Biochem.</i> 1992 Dec;24(12):1933-41;
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[illegible]

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